

## **REMARKS**

### **I. Introduction**

With the addition of claims 15 to 22, claims 8 to 22 are pending in the present application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

### **II. Rejection of Claims 8 to 12 and 14 Under 35 U.S.C. § 103(a)**

Claims 8 to 12 and 14 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 5,215,785 (“Strasser et al.”) and U.S. Patent No. 4,156,042 (“Hayman et al.”). Applicants respectfully submit that the combination of Strasser et al. and Hayman et al. does not render obvious the present claims for at least the following reasons.

Claim 8 relates to a method for coating a hollow body. Claim 8 recites the steps of contacting a powder mixture with an inner surface of the hollow body to be coated and heating the powder mixture. Claim 8 recites that the powder mixture includes a metal donor powder, an inert filler powder and an activator powder, the activator powder including a metal halide. Claim 8 further recites that a mean particle size of the inert filler powder is approximately equal to a mean particle size of the metal donor powder. Claim 8 further recites that the mean particle size of the metal donor powder and the mean particle size of the inert filler powder are greater than 40  $\mu\text{m}$  and that a metal donor powder content is 10% to 25% by weight of the powder mixture. Claim 8 has been amended herein without prejudice to recite that the metal donor powder includes a mixture of more than one alloy. No new matter has been added. See claim 10 and the Specification, for example, at p. 4, lines 32 to 36.

Hayman et al. purportedly relate to a process for coating articles such as turbine blades in a pack-cementation process. See Abstract. Hayman et al. state that the coating material may be chosen from a group: aluminum, chromium, titanium, zirconium, tantalum, niobium, yttrium, rare earth metals, boron and silicon together with a halide activator. See Abstract. In the first four examples provided by Hayman et al. the powder mix is stated to include  $\text{AlF}_3$ , Al and  $\text{Al}_2\text{O}_3$ . See col. 5, line 21 to col. 6, line 32. In a fifth example provided by Hayman et al. the powder mix is stated to include NaCl, Al and  $\text{Al}_2\text{O}_3$ .

See col. 6, line 39. In a sixth example provided by Hayman et al. the powder mix is stated to include NaF, Al and Al<sub>2</sub>O<sub>3</sub>. See col. 6, line 51.

Strasser et al. purportedly relate to a method for the powder pack coating of hollow bodies. See Abstract. The hollow bodies are stated to be coated with a powder mixture including 80 parts by weight Al<sub>2</sub>O<sub>3</sub> filler powder material and 40 parts by weight donator and activator powder material. See col. 3, lines 62 to 66.

Nowhere does the combination of Strasser et al. and Hayman et al. disclose, or even suggest, that a metal donor powder includes a mixture of more than one alloy, as recited in amended claim 8. In the one example provided by Strasser et al. the weight donator is stated to be made from AlTi or AlTiC. See col. 3, line 66. Further, as indicated above, in the six examples provided by Hayman et al. each powder mix contains only a single alloy. Therefore, the combination of Strasser et al. and Hayman et al. does not disclose all of the limitations of amended claim 8.

To establish *prima facie* obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In *re* Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In *re* Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In *re* Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In *re* Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). Since the combination of Strasser et al. and Hayman et al. does not disclose, or even suggest, all of the limitations of amended claim 8, as more fully set forth above, it is respectfully submitted that the combination of Strasser et al. and Hayman et al. does not render obvious amended claim 8.

As for claims 9 to 14, which depend from claim 8 and therefore include all of the limitations of claim 8, Applicants respectfully submit that the combination of Strasser et al. and Hayman et al. does not render obvious these dependent claims for at least the same reasons provided above in support of the patentability of claim 8. In *re* Fine, *supra* (any dependent claim that depends from a non-obvious independent claim is non-obvious).

In view of all of the foregoing, it is respectfully submitted that the combination of Strasser et al. and Hayman et al. does not render unpatentable the present claims. Withdrawal of this rejection is therefore respectfully requested.

**III. Rejection of Claim 13 Under 35 U.S.C. § 103(a)**

Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Strasser et al., Hayman et al. and U.S. Patent No. 5,989,733 ("Warnes et al.").

Applicants respectfully submit that claim 13, which depends from amended claim 8 and, therefore, includes all of the limitations of amended claim 8, is not rendered obvious by the combination of Strasser et al., Hayman et al. and Warnes et al. for at least the same reasons provided above in support of the patentability of claim 8. *Id.*

**IV. New Claims 15 to 22**

New claims 15 to 22 have been added herein. It is respectfully submitted that new claims 15 to 22 do not add any new matter and are fully supported by the present application, including the Specification. Independent claim 15, from which claims 16 to 22 depend, recites that a mean particle size of the inert filler powder is equal to a mean particle size of the metal donor powder. Strasser et al. state that the filler powder has an average particle size of 150  $\mu\text{m}$  and that an average grain size of the spherical powder particles is smaller than 150  $\mu\text{m}$ . See col. 3, lines 63 to 64 and col. 4, line 1. Therefore, it is respectfully submitted that claims 15 to 22 are patentable over the references relied upon in the Final Office Action.

**V. Conclusion**

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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Dated: June 11, 2004

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